

field of operations of this Naturalists' Society in South Wales, is appended.

Two memoirs (reprinted from the 'Geological Magazine'), and their plates, illustrative of fossil Reptiles and fossil Bivalved Entomostraca discovered in South Wales by Mr. J. E. Lee and Mr. W. Adams, and described by Prof. Owen and Prof. Rupert Jones respectively, form part of this highly praiseworthy volume of reports and transactions.

*Geology.* By Prof. JOHN MORRIS, F.G.S., &c., and Prof. T. RUPERT JONES, F.G.S., &c. First Series. 12mo. London: Van Voorst, 1870.

Professor Rupert Jones is probably of opinion that the clergy have too long had a monopoly of the convenience of possessing printed skeletons for their discourses. In order to extend a similar benefit to geological lecturers, he publishes, in the little volume now before us (which is to be followed by a Manual of Geology of the regulation pattern), the heads of lectures on Geology and Mineralogy delivered by him from 1866–1870, at the Cadet College, Sandhurst, together with the synopses of Lectures used at the Staff and Cadet Colleges, Sandhurst. As far as the mere furnishing of skeleton courses of lectures is concerned, this little book, coming from the hands of a highly accomplished geologist and experienced teacher, will prove of immense value to those who are entering upon a course of geological tuition, and especially to regular science-teachers and to schoolmasters, who, possessing already some knowledge of the subject, desire to give their pupils instruction in geology.

Professor Rupert Jones considers also that the book may be useful to the student, who "will find clear statements and explanations of the things, facts, and circumstances on which Geology is based;" and this, to a certain extent, is certainly the case; but it seems to us that the information given is too condensed and purely synoptical in its nature to enable any but very exceptional students to learn Geology from it. But with the help of other books there can be no doubt that these skeletons of courses of lectures, which contain perfectly intelligible references to a vast mass of details, may be of great service by the admirable series of classifications of geological facts which they present; and we must also confess, in the author's justification, that the amount of instruction that he has compressed into so small a space is perfectly astonishing, when we study the contents of his book by means of its cross references and index, in the manner recommended by him. Moreover, as a work of instruction, this part is placed rather at a disadvantage by its appearance without the second part, or Geological Manual properly so called, which will of course contain the expanded details of the subjects here treated with extreme brevity.

There is yet another light in which the authors do not seem to have regarded their present work, but viewed in which it seems to us to promise to be exceedingly serviceable—namely, as a note-book

for the use of those who have arrived at some proficiency in the study of geology. From its extreme comprehensiveness, there is scarcely a fact in general geology which is not alluded to in its pages; so that a student who has once acquired a knowledge of the science would be able, by a perusal of this little book, to refresh his memory of what he has learned. Interleaved and furnished with a few additional details and numerical data, it will form an admirable pocket-companion for the young geologist in his excursions.

The appendix contains, besides synopses of lectures, a valuable table of the geological formations occurring in the British Islands.

*A Manual of Zoology for the use of Students, with a general Introduction on the Principles of Zoology.* By HENRY ALLEYNE NICHOLSON, M.D. &c. Small 8vo. Blackwood: Edinburgh and London, 1870.

*Advanced Text-Book of Zoology, for the use of Schools.* By H. ALLEYNE NICHOLSON, M.D. &c. Small 8vo. Blackwood: Edinburgh and London, 1870.

THAT there has long been a great want of a good manual of zoology for the use of Students in this country there can be no doubt. Dr. Nicholson must have felt this in his position as Lecturer on Natural History in the Edinburgh Medical School; and in the first work indicated above he has endeavoured (not unsuccessfully) to supply the deficiency. His treatment of the subject is evidently founded chiefly upon Prof. Huxley's admirable 'Introduction to the Classification of Animals;' and in nearly all points which have been specially touched upon by that great zoologist the author generally follows him implicitly. Thus, as a matter of classification, Dr. Nicholson accepts Huxley's subkingdom of Annuloida in all its details, although, in his introduction, he lays down the principle that agreement in "morphological type" should constitute the foundation of every group, and we should think it rather difficult to demonstrate the existence of any unity of type in the groups referred to the Annuloida. We cannot think that the presence in both classes of a water-vascular system, and the agreement, such as it is, in the mode of development of *Nemertes* among the Scolecida and of the Echinodermata, can be held to furnish the necessary proof of unity of morphological type; and, on the other hand, if we were to admit that *Nemertes* and the Turbellaria (of which, however, *Nemertes* is a very aberrant form) might form a subkingdom with the Echinodermata, we should still be far from regarding the Turbellaria, Trematoda, Cestoda, Nematoda, Acanthocephala, Gordiacea, and Rotifera as constituting together only a single class. The fact is that the class Scolecida, as thus constituted, is, like Cuvier's subkingdom Radiata, really the residuary dusthole for the reception of every thing for which a suitable place cannot be found among the well-defined primary groups of the animal kingdom; and the Echinodermata are unfortunate in being here again associated in a